

CLAIMS

1. An electronic method of improving the efficiency of a radiologist, comprising the steps of:

a) providing a system that includes a computer and a plurality of monitors interfaced with the computer, each monitor for displaying an image;

b) using at least one of the monitors to simulate a radiology "light box" for displaying electronic radiology images;

c) using at least one of the monitors to simulate a digital graphical representation of a patient's master folder;

d) using a hyperlink to open the folder displayed in step "c" to display information contained in the folder; and

e) using a hyperlink that accesses the folder to display a radiology image.

2. The method of claim 1 wherein in step "d" a voice activated command is used to open the patient's master folder.

3. The method of claim 1 wherein in step "d" a trackball device is used to open the patient's master folder.

4. The method of claim 1 further comprising the step of providing a combination dictation and trackball device, and wherein in step "d" a user can selectively use either a voice activated command or a trackball to open the patient's master folder.

5. The method of claim 1 further comprising the step of using the computer to interface the monitors and the hyperlink.

6. The method of claim 4 further comprising the step of using the computer to interface the monitors and the combination dictation and trackball device.

7. The method of claim 1 wherein there are two monitors in step "c" that are used to display electronic radiology images.

8. The method of claim 1 wherein the monitor in step "c" that is used to display electronic radiology images is a high resolution monitor.

9. The method of claim 7 wherein the monitors in step "c" that are used to display electronic radiology images is a high resolution monitor.

10. The method of claim 1 wherein in step "b" the image viewed is an ultrasound image.

11. The method of claim 1 wherein in step "b" the image viewed is a magnetic resonance image.

12. The method of claim 1 wherein in step "b" the image viewed is a computer tomography image.

13. The method of claim 1 wherein in step "b" the image viewed is a computer radiology image.

14. The method of claim 1 wherein in step "b" the image viewed is a nuclear medicine image.

15. A method for reviewing electronic radiology information including patient demographics, radiology procedures, radiology reports and radiology images, comprising the steps of:

- a) loading the radiology information associated with a selected group of patients that are assigned to a selected radiologist into a computer memory;
- b) displaying an image of a radiology master folder on an area of a computer display;

- c) generating data fields associated with a digital master folder on the image of a master folder including patient's name, medical record number, date of birth, sex, and information regarding all procedures including date, type of procedure, report, and radiologist;
- d) displaying information associated with the patient from computer memory in a data field on the computer display;
- e) associating links with the procedure and report data fields to provide for the viewing of additional information or images when clicked;
- f) clicking on the report field, displays a new window that contains the text of the report and a link to the digitally recorded dictation of the report, that when clicked will play the recording;
- g) placing a cursor over the report field on the digital master folder, to display summary information of the report;
- h) clicking on the procedure field to send a command to a viewing portal to load all of the procedures and images that meet the criteria of the radiologist's file;
- i) generating a searchable and selectable list of patients that have procedures assigned to the radiologist on the computer display; and
- j) providing commands that navigate through the stack of master folders, displaying information associated with a new patient in a data field on the computer display from computer memory.

16. An apparatus to access, store, and distribute electronic radiology information including patient demographics, radiology procedures, radiology reports and radiology images comprising:

- a) an information data base including patient demographics, radiology identification number, procedures, images, reports, orders and appointments;
- b) means for transmitting and receiving the information between computers connected to a computer network via extensible markup language (XML), HTTP, TCP/IP; and
- c) means for searching for a plurality of user specified types of information contained in the information data base.

17. A multi-monitor radiology image viewing system comprising:

- a) a plurality of monitors;
- b) a combination dictation and trackball device that provides a hyperlink for the viewing of the patients' information and medical images on separate monitors comprising:
- c) a radiology portal that includes a monitor and a computer for the searching and that includes viewing medical information;
- d) said viewing portal consisting of at least two monitors designed for the viewing of a plurality of radiology images including computer radiology, computer tomography, ultrasound, nuclear medicine, and magnetic resonance images; and
- e) said combination dictation and trackball device including a voice component that issues operational and navigational commands to the radiology portal and viewing portal by providing continuous speech recognition for the creation of dictated radiology reports.

18. The system of claim 17, wherein the radiology portal consists of a flat panel monitor and computer for the searching and viewing of medical information stored internal and external to the system.

19. The system of claim 17, wherein the radiology portal consists of a touch screen flat panel monitor and computer for searching and viewing of medical information stored internal and external to the system.

20. The system of claim 17, wherein the radiology portal consists of a flat panel monitor and computer with multi-processors for searching and viewing of medical information stored internal and external to the system.

21. The system of claim 17, wherein the radiology portal consists of a touch screen flat panel monitor and computer with multi processors for searching and viewing of medical information stored internal and external to the system.

22. The system of claim 17, wherein the viewing portal consists of a single high-resolution monitors design for the viewing of a plurality of radiology images including computer radiology, computer tomography, ultrasound, nuclear medicine, and magnetic resonance images.

23. The system of claim 17, wherein the viewing portal consists of a single high-resolution computer monitor.

24. The system of claim 17, wherein the viewing portal consists of two high-resolution computer monitors.

25. The system of claim 17, wherein the viewing portal consists of a four high-resolution monitors design for the viewing of a plurality of radiology images including computer radiology, computer tomography, ultrasound, nuclear medicine, and magnetic resonance images.

26. The system of claim 17, wherein the viewing portal includes six high-resolution monitors for the viewing of a plurality of radiology images including computer radiology, computer tomography, ultrasound, nuclear medicine, and magnetic resonance images.

27. The system of claim 17, wherein the viewing portal consists of eight high-resolution monitors design for the viewing of a plurality of radiology images including computer radiology, computer tomography, ultrasound, nuclear medicine, and magnetic resonance images.

28. The system of claim 17, wherein the combination dictation and trackball device includes a separate mouse and microphone.

29. A method for loading images from a current radiology procedure and specific images from prior radiology procedures in a user specified order into a user interface that includes a computer and computer monitors comprising:

- a) receiving and loading patient information into computer memory;
- b) comparing the information of step "a" to display requirements contained in a user profile in order to determine the order in which images from the current procedure are displayed and the order in which selected images from selected prior procedures are displayed, and creating a list of images to display;

c) determining which images on the list already exist in the image cache of the system of claim 17; and

d) downloading all images that do not exist in the image cache of the system of claim 17.

30. A method for displaying images from a current radiology procedure and specific images from prior radiology procedures in a user specified order into the system of claim 17 comprising:

a) loading the image list created in the method of claim 29 into the viewing portal and digital roto viewer;

b) resizing the images to fit correctly into the digital roto viewer's frames;

c) displaying a roto viewer containing all of the images in the correct order on the first high-resolution monitor; and

d) display the digital roto viewer's first frame in the viewer portal's light-box.

31. A method of dictating a radiology procedure's diagnosis into the system of claim 17 comprising:

a) issuing a command to dictate a report in the viewer portal;

b) sending a command to the radiology portal which displays the dictated text of the report;

c) loading the patient demographic and procedure information into the appropriate sections of the new window;

d) digitally recording the voice input;

e) converting the voice input into text via continuous speech recognition;

f) displaying the text in a section of new window in the radiology viewer;

g) issuing a command to digitally sign the report in the viewer portal via the dictaphone/trackball, sending a command to the radiology viewer to generate and sign the report;

h) generating and digitally signing the report in the radiology viewer; and

i) inserting the report into the system of claim 17.